

## **APPENDIX B**

### **ENVIRONMENTAL PROTECTION MEASURES INCLUDED IN THE PROJECT DESCRIPTION**

The MSTI project incorporates Environmental Protection Measures that NorthWestern would employ as necessary and appropriate, through project design, project construction and during operation and maintenance, to avoid or minimize environmental impacts and to protect the environment as standard practice for the entire project. Environmental Protection Measures have been incorporated into the project for general application on a nonspecific basis as part of the project description. The Environmental Protection Measures described in this document are preliminary measures that are part of the project description, but are not finalized or committed to until further discussions with the MDEQ and other agencies.

#### **1.0 General**

1.1 All construction vehicle movement outside the right-of-way normally will be restricted to pre-designated access, contractor-acquired access, or public roads.

1.2 The areal limits of construction activities normally will be predetermined, with activity restricted to and confined within those limits.

1.3 In construction areas where recontouring is not required, vegetation will be left in place wherever possible and original contour will be maintained to avoid excessive root damage and allow for resprouting. Disturbance would be limited to overland driving where feasible to minimize changes in the original contours.

1.4 To reduce visual contrast and reduce siltation in construction areas (e.g., marshaling yards, structure sites, spur roads from existing access roads) where ground disturbance is substantial, surface preparation and reseeding would occur. The method of restoration would normally consist of loosening the soil surface, reseeding, installing cross drains for erosion control, placing water bars in the road, and filling ditches. Methods would be detailed in the Plan of Development (POD).

1.5 A POD including specific plans to address mitigation requirements would be prepared in consultation with the Agencies prior to construction being authorized. These plans would detail additional measures required to minimize potential proposed project impacts on natural resources and human safety. Plans typically include reclamation and revegetation of the right-of-way, resource protection, noxious weed control, dust control, hazardous spill prevention, fire prevention and storm water pollution prevention.

1.6 The POD would outline any required monitoring guidelines for the construction, operation, and maintenance of the line in order to avoid inadvertent impacts to resources. The Agencies would appoint an authorized inspector to oversee construction activities, authorize revisions or changes in the field, and determine if environmental protection is being done according to the approved POD. NorthWestern Energy would conduct a training program to inform construction crews of all permit requirements and restrictions relevant to Proposed Project construction.

1.7 Prior to construction, all supervisory construction personnel will be instructed on the protection of cultural, paleontological and ecological resources. To assist in this effort, the construction contract will address: (a) Federal, state and tribal laws regarding antiquities, fossils, plants and wildlife,

including collection and removal; (b) the importance of these resources and the purpose and necessity of protecting them.

1.8 All waste products and food garbage from construction sites would be deposited in covered waste receptacles, or removed daily. Garbage would be hauled to a suitable disposal facility.

## **2.0 Land Use and Recreation**

2.1 Existing improvements would be repaired or replaced (if they are damaged or destroyed by construction activities) to their condition prior to disturbance as agreed to by the parties involved.

2.2 Fences and gates would be repaired and replaced to their original condition as required by the landowner or the land management agency if they are damaged or destroyed by construction activities. Temporary gates would be installed only with the permission of the landowner or the land management agency. Gates would be closed and locked, depending on agreement with the land management agency and private landowners.

2.3 All existing roads would be left in a condition equal to or better than their condition prior to the construction of the transmission line.

2.4 To the extent feasible, project facilities, including structures and access roads would be installed along property boundaries. Consultation with the landowner or land management agency would be conducted to identify facility locations that create the least potential for impact to property and its uses.

2.5 Construction staging areas and pulling sites would be located adjacent to existing roads where practical. Coordination with landowners would be conducted to establish construction areas (such as conductor pulling and splicing areas and construction yards).

2.6 During project construction, it may be necessary to remove livestock from areas where heavy equipment operations are taking place. Arrangements would be made with landowners and livestock owners to keep livestock out of these areas during those periods.

2.7 Prior to construction of the transmission line, coordination with beekeepers would occur to minimize potential environmental impacts, as appropriate, to mitigate general disruption caused by the construction activities.

2.8 To limit new or improved accessibility into the area by off-highway vehicles (OHVs) and other motorized vehicles, road access will be controlled in accordance with management directives of the Agencies. Physically close appropriate roads using boulders, tank traps, and gates. Plan will be developed in the POD and approved by the Agencies.

2.9 Necessary and/or appropriate ministerial land use permits will be obtained.

2.10 Construction would be timed, whenever practical, to minimize disruption of normal seasonal activities for cropland (planting and harvesting) and non-irrigated rangeland as well as avoiding peak use periods (i.e., weekends and holidays) at parks, recreation, and preservation areas. Construction activities will be coordinated with relevant agencies and/or landowners prior to construction.

2.11 Advanced notice of construction activities would be given to landowners and residents potentially affected by construction activities. Adequate access to existing land uses would be provided during periods of construction and landowners notified of alternative access. Nighttime construction near noise-sensitive land uses (e.g., residences and campers at recreation areas) would be avoided.

2.12 Construction operations would avoid, to the extent feasible, the disturbance of agricultural soil during the wet season. The use of heavy equipment on agricultural land would be minimized to avoid soil compaction. Construction crews can reduce the amount of soil compaction by working when the ground is frozen, using equipment with more tires and wider tires to distribute the weight of the vehicle, and tilling the severely compacted areas after construction is completed.

2.13 Obtain encroachment permits or similar legal agreements from state authorities for each affected federal, state, and local roadways. Such permits are needed for roads that would be crossed by the transmission line, as well as for the parallel roads where transmission line construction activities would require the use of the public right-of-way (e.g., temporary lane closures).

2.14 Coordinate in advance with emergency service providers to avoid restricting movements of emergency vehicles. Local agencies would then notify respective police, fire, ambulance and paramedic services. Notify local agencies of the proposed locations, nature timing, and duration of any construction activities and advise of any access restrictions that could impact their effectiveness.

2.15 Determine which aerial applicators operate in the project area. Provide written notification to all aerial applicators stating when and where the new transmission lines and tower/pole structures will be erected in order to educate pilots to significant dangers that would exist as a result of development of the Project. Provide all aerial applicators with aerial photographs or topographic maps clearly showing the transmission lines and tower/pole structures in relation to agricultural lands. However, even with implementation of this mitigation measure, hazards to aerial spraying would continue to pose safety hazards to aerial applicators, or could preclude spraying activities in certain areas.

2.16 Project design and construction would comply with applicable regulations associated with railroads/railways in the project area. Required permits for entering railroad right-of-way would be obtained from railroads/railways.

### **3.0 Visual Resources**

3.1 No paint or permanent discoloring agents would be applied to rocks or vegetation to indicate limits of survey or construction activity.

3.2 At residences, the right-of-way will be aligned, to the extent practicable, to reduce impact on the residences and inhabitants.

### **4.0 Cultural and Paleontological Resources**

4.1 Cultural and historical resources will continue to be considered during the construction phases of project implementation. On public lands this will involve pedestrian surveys to inventory and evaluate cultural resources within any appurtenant impact zones beyond the corridor, such as access

roads and construction equipment yards. In consultation with appropriate land managing agencies and state historic preservation officers, specific mitigation measures will be developed and implemented to mitigate any identified adverse impacts. These may include project modifications to avoid adverse impacts, monitoring of construction activities and data recovery studies.

4.2 Prior to construction, all supervisory construction personnel would be instructed on the protection of cultural resources. To assist in this effort, the construction contract would address: (a) federal and state laws regarding antiquities, including collection and removal; (b) the importance of these resources and the purpose and necessity of protecting them; and (c) methods for protecting sensitive resources.

4.3 In the event that potentially historic or cultural resources are discovered during construction, potentially destructive work within 300 feet of the find would be halted. NorthWestern Energy's construction inspector would immediately implement the following measures:

- Flagging would be erected to prohibit potentially destructive activities from occurring in a given area.
- NorthWestern Energy's contract archeologist would make a preliminary assessment of the newly discovered resource.
- If the archeologist determines that the discovery represents a potential new site, or an undocumented feature of a documented site, FS, BLM, and the SHPO would be notified.
- Construction would not resume in the identified area until cleared by the archeologist (private land) and the agencies' Authorized Officer.

Pursuant to 43 CFR 10.4(g), the permit holder must notify the Authorized Officer, by telephone, with written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony. Further, pursuant to 43 CFR 10.4(c) and (d), activities must stop in the vicinity of the discovery and the site protected for 30 days or until notified to proceed by the Authorized Officer.

4.4 On public lands, the specific areas of ground disturbing activities (e.g., access road construction, structure sites, staging areas, etc.) will be identified and surveyed prior to construction.

4.5 The BLM and/or FS may require a cultural resource monitor be present during construction in areas the BLM/FS determines to be culturally sensitive.

4.6 The primary focus of paleontological mitigation efforts should be areas on public land of greatest disturbance and areas likely to have significant fossils.

## **5.0 Biological Resources**

5.1 Prior to construction, all supervisory construction personnel would be instructed on the protection of ecological resources. To assist in this effort, the construction contract would address: (a) federal and state laws regarding plants and wildlife; (b) the importance of these resources and the purpose and necessity of protecting them; and (c) methods for protecting sensitive resources.

- Include instructing wildlife policy to prohibit unauthorized off-road vehicle use in the project area, and to discourage wildlife harassment and littering.

5.2 Mitigation measures developed during the consultation period under Section 7 of the Endangered Species Act (1973) as amended would be adhered to as specified by the U.S. Fish and Wildlife Service (USFWS).

5.3 The boundaries of sensitive plant populations would be delineated with clearly visible flagging or fencing based on surveys completed prior to construction. In the event any special-status plants would require relocation, permission would be obtained from the Agencies. If avoidance or relocation were not practical, the topsoil surrounding the plants would be salvaged, stored separately from subsoil and spread during the restoration process.

5.4 Prior to construction NorthWestern Energy would develop a Noxious Weed and Invasive Plant Control Plan in consultation with the Agencies and local weed control districts to minimize the effects of noxious weeds due to proposed Project activities. The plan would address measures to minimize spread of noxious weeds and invasive plants.

5.5 Ground disturbance would be limited to that necessary to safely and efficiently install the proposed facilities and would be described in detail in the POD.

5.6 Transmission line design will conform to accepted standards to eliminate the potential electrocution hazard to raptors.

5.7 NorthWestern Energy would prepare a revegetation plan in consultation with the Agencies. The plan would specify disturbance types and their appropriate revegetation techniques to be applied for all proposed Project work areas, access roads and all sidecast materials. Techniques could include reseeded native or other acceptable vegetation species with certified weed-free seed. The plan would include management and maintenance procedures approved by the FS for ongoing use of access roads and temporary work areas.

- Erosion and sediment control measures would be specified in the POD and meet the requirements of the Clean Water Act.
- Do not use clover in the seed mix used on any disturbed area during active operations to reduce grizzly/human encounters caused by bears being drawn to clover sites.

## **6.0 Soil and Water Resources**

6.1 Roads will be built at right angles to the streams to the extent practicable. Existing public roads will be utilized to the extent possible. Culverts will be installed where needed. All construction and maintenance activities will be conducted in a manner that will minimize disturbance to vegetation, drainage channels and streambanks. In addition, road construction will include dust-control measures during construction in sensitive areas, as required. All existing roads will be left in a condition equal to or better than their condition prior to the construction of the transmission line.

6.2 Disturbed areas around structures, at pulling and tensioning sites, and on the edges of roadways will be rehabilitated following construction (as specified by the Agencies and the Authorized Officer).

6.3 A pre-construction field verification of landslide prone areas will be made. Design changes to roads may need to be made based on the field verification.

6.4 Structures located within river floodplains would be designed to minimize the catching of flood debris to prevent flow obstructions and scouring during flood flows.

6.5 A geotechnical engineering report will be prepared prior to construction that appropriately addresses risks to structures and roads due to potential seismicity and liquefaction. Location-specific mitigation measures for other geological hazards and sensitive features are identified in the Specifically Recommended Mitigation Measures, in Appendix C.

## **7.0 Air Quality**

7.1 Road construction would include dust-control measures, as required and identified in the approved POD.

7.2 All requirements of those entities having jurisdiction over air quality matters will be adhered to and any permits needed for construction activities will be obtained. Open burning of construction trash will not be allowed unless permitted by appropriate authorities.

## **8.0 Health, Safety, Noise**

8.1 All construction vehicle movement outside the right-of-way would be restricted to designated access, contractor-acquired access, or public roads.

8.2 NorthWestern Energy will perform a pre-construction and post-construction radio and television quality survey along the project route. NorthWestern Energy will respond to complaints of radio or television interference generated by the transmission line by investigating the complaints and implementing appropriate mitigation measures. The transmission line will be patrolled on a regular basis so that damaged insulators or other transmission line equipment that could cause interference, are repaired or replaced.

8.3 Mitigation would be applied as needed to eliminate induced currents and voltages onto conductive objects (should they occur) sharing a right-of-way to the mutual satisfaction of the parties involved.

8.4 Hazardous materials will not be drained onto the ground or into streams or drainage areas. Totally enclosed containment will be provided for all trash. All construction waste including trash and litter, garbage, other solid waste, petroleum products and other potentially hazardous materials will be removed to a disposal facility authorized to accept such materials.

8.5 Appropriate safety guidelines would be followed as required by state and federal regulations (29 CFR 1910.109) relating to blasting operations, should blasting be necessary.

8.6 Appropriate traffic control measures would be utilized to ensure public safety during construction. Prior notice would occur for any extended delays or road blockage.

8.7 Towers and/or ground wire will be marked with highly visible devices where required by governmental agencies (e.g., Federal Aviation Administration).

8.8 NorthWestern Energy will continue to monitor studies performed to determine the effects of audible noise and electrostatic and electric and magnetic fields in order to ascertain whether these effects are significant.

8.9 A bundle configuration and large diameter conductors will be used to limit audible noise, radio interference and television interference due to corona. Tension will be maintained on all insulator assemblies to assure positive contact between insulators, thereby avoiding sparking. Caution will be exercised during construction to avoid scratching or nicking the conductor surface, which may provide points for corona to occur.

8.10 Potential interference could occur to certain types of GPS systems installed in farm equipment. However, the effect of transmission lines on this technology needs further study. If problems occur in GPS systems because of the transmission line, NorthWestern Energy will work with farmers to resolve these issues.